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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Replacement of Part 90 by Part 88 to	)	PR Docket No. 92-235
Revise the Private Land Mobile Radio	)	
Services and Modify the Policies	)	
Governing Them	)	

REPLY COMMENTS OF HEWLETT-PACKARD COMPANY

Hewlett-Packard Company ("HP") hereby submits the following reply comments with respect to the Notice of Proposed Rulemaking ("Notice") in the above-captioned proceeding.[1]

Not surprisingly, and despite the importance of the issue, only HP and Spacelabs Medical, Inc. ("Spacelabs") commented directly on the impact that this proceeding will have on low-power electrocardiogram ("ECG") and other medical telemetry technologies that operate on offset frequencies in the 450-470 MHz band. As HP noted in its initial comments in this proceeding, the current proposals regarding refarming of private land mobile frequencies below 512 MHz threaten the continued provision of these life-saving medical technologies.

While the Commission's goal, as expressed in the Notice, is to foster the more efficient use of the radio spectrum, for all practical purposes, ECG and other life-saving medical technology devices already meet the efficiency standards proposed by the Commission for 2004. Still, as discussed in HP's initial comments, the special requirements associated with monitoring the vital signs of cardiac patients have been translated into a number of design and operating characteristics in the ECG device, which make the devices vulnerable to interference from other users of the band, who must comply with the Commission's new rules for the band.[2]

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1 By Order, DA 93-145, released February 9, 1993, the period for filing reply comments in response to the initial comments filed in this proceeding was extended until July 14, 1993; by Order, DA 93-800, released July 2, 1993, the period for filing reply comments was extended again until July 29, 1993.

2 ECG operations must (i) have lightweight units so that cardiac patients can wear them and, at the same time, be protected from harmful levels of RF exposure; (ii) have low power devices to preserve battery life

(footnote continued on next page)

Accordingly, in its initial comments, HP urged the Commission to create a reserved portion of the 450-470 MHz band for the primary use of medical telemetry operations and, at the same time, to prohibit new high power operations from locating on or within 12.5 kHz of the 450-470 MHz frequencies currently available for low power medical telemetry devices until hospitals are given sufficient time to relocate those devices to the frequencies in the new reserved band. Some parties essentially have taken the position that low power devices should be excluded from the band, while others have suggested other frequency bands for such devices.[3]

While HP believes strongly that there is an urgent need for an adequate and secure frequency band for medical telemetry technologies, none of the parties' suggestions and proposals meet that need. At present, the only viable way to preserve the operating environment for ECG and other medical telemetry technologies is to designate a portion of the 450-470 MHz band for low-power medical telemetry use on a primary basis.

I. No Party Has Submitted An Acceptable Proposal To Shift Low Power Medical Telemetry Devices To Other Portions Of The Radio Spectrum.

Some parties have proposed that low power devices currently operating in the 450-470 MHz band should migrate to frequencies yet to be allocated by the Commission for this purpose. Advanced Mobilecomm, Inc. ("AMI"), for example, notes that the use of low power technologies on offset channels in the 450-470 MHz band is incompatible with the Commission's new vision of this band as set forth in proposed Part 88. See

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and to allow frequencies to be reused by other low-power medical telemetry devices at nearby locations; (iii) have receive antennas that are highly sensitive so as to permit the monitoring of numerous patients within short distances (unfortunately, this makes them highly susceptible to interference); and, (iv) given

Comments of AMI at 11. For this reason, AMI suggests that these low power users should be moved to the 2 GHz band, which, AMI contends is ideal for low power applications. *Id.* at 12.

While HP agrees with AMI's observation that low power users on the offset channels in the 450-470 MHz band do not fit in the Commission's view of proposed Part 88, HP strenuously disagrees that 2 GHz is a suitable home for these users. Even if these frequencies were already available for certain low power applications, which they are not, 2 GHz frequencies would be unsuitable for ECG and other medical telemetry devices because the propagation characteristics of these devices require that they be located below 1000 MHz (see n. 2).

Similarly, Spacelabs urges the Commission to begin a proceeding for the purpose of allocating to medical telemetry operations a portion of spectrum that is expected to be made available by the federal government sometime in the next seven years. See *Comments of Spacelabs* at 16-18. While HP supports in almost all respects the comments of Spacelabs, HP has a number of reservations regarding Spacelabs' proposal concerning government spectrum. There is, for example, no assurance that any of the federal government spectrum would be frequencies below 1000 MHz, which is essential for medical telemetry devices.

It is, moreover, unclear exactly when spectrum released by the federal government would be available for allocation by the FCC and what terms and conditions might accompany the allocation of any spectrum. For example, the Commission could be required to assign those frequencies using competitive bidding mechanisms, which would be completely inappropriate for health care technologies to be used by the community, when the pressing national need is to reduce health care costs. In view of these and other uncertainties associated with use of frequencies to be released by the federal government, HP cannot support Spacelabs' suggested solution to the medical telemetry dilemma.

Unlike some of the other parties filing comments in this proceeding, the Associated Public-Safety Communications Officers, Inc. ("APCO") does not propose that low power devices leave the 450-470 MHz band entirely. APCO suggests that the Commission should permit high power operations on the 12.5 kHz offset channels in the 460-470 MHz band, relegating all low-powered users to secondary status or requiring their migration to the 450-460 MHz band (where low powered stations would have primary status on the 12.5 kHz offsets). See *Comments of APCO* at 16. While this

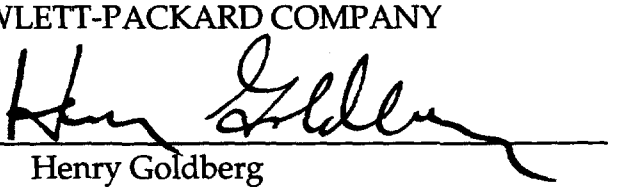
would preserve the viability of those low power services that operate on the offset channels in the 450-460 MHz band, ECG and other medical telemetry stations are located almost exclusively in the 460-470 MHz band. Thus, APCO's proposal, if adopted, would disrupt irreparably these life-saving medical telemetry operations. Accordingly, HP strenuously opposes APCO's proposal.

II. Conclusion

The Commission's refarming proceeding offers great promise for establishing an interference-free home for ECG and other essential life-saving medical telemetry technologies. Alarmingly, this proceeding also threatens to compromise their continued availability. HP believes that the only long-term viable solution for the continued provision of ECG and other life-saving medical technologies in the 450-470 MHz band is to designate a portion of the band for low-power medical telemetry use on a primary basis.

Respectfully submitted,

HEWLETT-PACKARD COMPANY

By: 

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